ATTORNEY DOCKET NO. 11321/P077WOUS

PATENT U.S. Ser. No. 10/575,352

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Richard E. Smalley, et al.

Serial No.:

10/575,352

Filed:

January 31, 2008

Title:

Amplification of Carbon Nanotubes via Seeded Growth Methods

Confirmation No:

9439

Art Unit:

1736

Examiner:

Daniel McCracken

MAIL STOP: AMENDMENT Commissioner for Patents P.O. Box 1450

Alexandría, VA 22313-1450

DECLARATION OF CHRISTOPHER A. DYKE UNDER 37 C.F.R. § 1.132

1. My name is Christopher A. Dyke. I am over the age of eighteen (18) years and am of sound mind, have never been convicted of a felony, and am competent to testify herein. The matters set forth herein are within my personal knowledge and are true and correct.

2. I am an applicant and inventor of United States Patent Application No. 10/575,352, filed on January 31, 2008 (hereinafter the "Application"). The Application claims the benefit of United States Provisional Patent Application Nos. 60/511,175 (filed on October 14, 2003), 60/587,234 (filed on July 12, 2004), and 60/598,630 (filed on August 4, 2004). Richard E. Smalley, Robert H. Hauge, Andrew R. Barron, James M. Tour, Howard K. Schmidt, W. Edward Billups, Valerie C. Moore, Elizabeth Whitsitt, Robin E. Anderson, Ramon Colorado, Michael P. Stewart, and Douglas C. Ogrin are also co-inventors of the Application. Dr. Richard

- E. Smalley is now deceased. Therefore, Ms. Irene M. Marek is included in the Application solely as the legal representative of Dr. Richard E. Smalley.
- 3. I am a co-author of the publication entitled "Electronic Structure Control of Single-walled Carbon Nanotube Functionalization" by Strano et al. Science, 301:2003, pp. 1519-1522. (hereinafter "Strano").
- 4. It is my understanding that the Examiner for the above Application has relied on various portions of Strano to reject the claims of this Application. Specifically, it is my understanding that the Examiner has rejected the claimed invention in the Application in view of Strano's alleged disclosure of selective chemistry that can be used to separate, deposit, or chemically link nanotubes of a particular electronic structure, and the use of functionalization to sort carbon nanotubes. It is also my understanding that the Examiner has indicated that the aforementioned disclosure appears on pages 1520 and 1522 of Strano.
- 5. Inventors Robert H. Hauge, James M. Tour, and Richard E. Smalley are also coauthors of Strano. However, Inventors Andrew R. Barron, Howard K. Schmidt, W. Edward
 Billups, Valerie C. Moore, Elizabeth Whitsitt, Robin E. Anderson, Ramon Colorado, Michael P.
 Stewart, and Douglas C. Ogrin were not included in the authorship of Strano because they had
 not made substantive contributions to the project disclosed in Strano.
- 6. Michael S. Strano, Monica L. Usrey, Paul W. Barone, Matthew J. Allen, Hongwei Shan, and Carter Kittrell are also co-authors of Strano. However, the above-mentioned co-authors at least did not contribute to the conception of the claimed invention in the Application.

ATTORNEY DOCKET NO. 11321/P077WOUS

PATENT U.S. Ser. No. 10/575,352

7. With regard to Strano's alleged disclosure of any portions of the claimed invention, including Strano's disclosure set forth in Paragraph 4 of this Declaration, Strano describes my

own work, the work of co-inventor Robert H. Hauge, the work of co-inventor James M. Tour,

and the work of co-inventor Richard E. Smalley.

8. This declaration is filed under 37 CFR § 1.132 in support of the Application. The

assertions in this declaration are made based on my training, experience and personal knowledge.

9. I hereby declare that all statements made herein of my own knowledge are true and

that all statements made on information and belief are believed to be true; and further that these

statements were made with the knowledge that willful false statements and the like so made are

punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States

Code, and that such willful false statements may jeopardize the validity of the application or any

patent issued thereon.

Christopher A. Dyke

September 16,2011

Sate